SIERRA CLUB
FOUNDED 1892

March 14, 2011

Robert R. Scott, Director
Air Resources Division
New Hampshire Department of Environmental Services
79 Hazen Drive, PO Box 95
Concord, NH 03302-0095

Re: Preliminary Determination of Baseline Mercury Input

Dear Mr. Scott:

On behalf of the New Hampshire Sierra Club, I submit the following comments regarding the Preliminary Determination of Baseline Mercury Input:

1. The United States Environmental Protection Agency [EPA] has not issued maximum achievable control technology standards [MACT] for the hazardous air pollutant mercury that complies with the standards of 42 USC 7412[d][2], including for Merrimack Station, Units 1 and 2 and Schiller Station, Units 4, 5 and 6, each major sources of mercury pollution. 42 USC 7412[c] [2] and [3]. The failure of EPA to issue MACT standards has triggered the statutory duty of NHDES-ARD to develop a mercury emissions limitation that complies with 42 USC 7412[j][2] and [5].[1]

The Preliminary Determination of Baseline Mercury Input assumes that mercury emissions be limited as provided in RSA 125-O:12, III. The New Hampshire statute does not comply with the mandate imposed by Clean Air Act, 42 USC 7412 for the reason that even if PSNH complies with the New Hampshire statute it will not satisfy the emissions standards set forth in 42 USC 7412 [d][3]-[4].

42 USC 7412 [d][3] requires that the emission limit for an existing source of hazardous air pollutants be no less stringent than the average emission limitation achieved by the best performing 12 percent of existing sources. 42 USC 7412[d] [4] requires that the emission limit take into account a health threshold with an adequate margin of safety.

RSA 125-O:12-14 does not address either of these Clean Air Act criteria. The NHDES-ARD Preliminary Determination of Baseline Mercury Input is silent regarding the criteria.

2. A mercury emission limitation for coal fired electric generating units, that is expected to meet MACT standards, must start with a baseline. Coal contains mercury. The mercury in the coal must be quantified before it is burned to establish the baseline. After combustion, mercury is emitted from the stacks into the atmosphere, chemically changed. The Clean Air Act requires that the mercury emissions from the stacks be quantified in order to determine whether or not the pollution control measures in place at the power plant satisfy the MACT standard. In other words, do the pollution control measures [starting with the amount of mercury in the coal before it is burned] on

[1] An EPA power plant MACT is expected on March 15, 2011.

the electric generating unit reduce the amount of mercury emitted from the stacks [after the coal is burned] to the maximum achievable extent [MACT]?

Coal is not a homogenous commodity. The chemical composition of different types of coal varies, depending on the source, the coal seam, whether the coal is run of mine, reprocessed fines or slurry and the preparation of the coal, including whether it has been washed[2]. Each of these factors contributes to the variability of coal cleanliness and chemistry.

Some coal has more mercury than other coal, just as some coal has more sulfur than other coal.[3] Steam coal burned in power plants [as distinguished from metallurgical coal] is mostly bituminous coal, high in sulfur and other elements, has less heat content and burns dirty.

Common sense dictates that the less mercury in the coal before it is burned means the less mercury that is emitted from the stacks after it is burned. It follows that MACT must include a standard that requires that electric generating units such as Merrimack Station and Schiller Station burn the cleanest coal, with lowest mercury content.

The NHDES-ARD Preliminary Determination of Baseline Mercury Input does not impose a common sense coal specification that would require PSNH to burn coal with the lowest mercury content.

3. The Preliminary Determination of Baseline Mercury Input does not include a specification for the mercury content of the coal to be burned at each electric generating unit. What the Preliminary Determination does is to calculate an average of the various types of coal burned over the years 1995-2006, ["coal used traditionally", language found in RSA 125-O:12-14], the mercury content of the coal for the period August, 2006, through July, 2007, multiplied by the average annual throughput of coal for the period 2003-2005, to determine the amount of mercury in the coal burned in each electric generating unit on an annual basis. NHDES-ARD made the calculation based upon data summaries provided by PSNH.[4] The calculation of the coal burned on an annual basis for each of the generating units, Merrimack Units 1 and 2 and Schiller Station 4, 5 and 6 was then grossed up to conclude that the Baseline Mercury Input would be 228 pounds per year.

There are problems with this approach. One, it means, for example, that if Schiller Station is not operating, the entire 228 pounds could be burned at Merrimack Station, potentially compounding the already dangerous mercury hot spots downwind of Merrimack Station.[5] Two, the multi-year averaging method allows PSNH to continue using the same dirty coal that it has burned over the years. The averaging methodology may enjoy the window dressing that RSA 125-O:12-14 provides, but it is not the maximum achievable control technology required by the Clean Air Act.[6]

4. Mercury is a dangerous neurotoxin that has contaminated every water body in New Hampshire. Recent studies[7] have found elevated concentrations of mercury in wildlife in the Merrimack River watershed extending from

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[2] Some coal producers make large capital investments in coal preparation plants to reduce sulfur and other unacceptable components.

[3] The March 8, 2010, submission by PSNH to NHDES-ARD Attachment B contains a data summary that demonstrates the substantial variability of the mercury and sulfur content of coal. For example, the coal that PSNH proposes it burn at Merrimack Station, Unit 2, e.g., 100% Bailey coal, has a mercury and sulfur content twice as high as Pocahontas coal.

[4] There is scant evidence in the NHDES-ARD administrative record of actual laboratory analysis supporting the PSNH data summaries of the mercury content in the coal.

[5] Studies, including NHDES-ARD air dispersion tests, have established that there are mercury "hot spots" downwind of Merrimack Station.

[6] The weak, ambiguous statutory language in RSA 125-O:12-14 is a testament to the power of the many high paid PSNH lobbyists.

[7] Driscoll, C.T., D. Evers, K.F. Lambert, N. Kamman, T. Holsen, Y-J. Han, C. Chen, W. Goodale, T. Butler, T. Clair, and R. Munson. Mercury Matters: Linking Mercury Science with Public Policy in the Northeastern United States. Hubbard Brook Research Foundation. 2007. Science Links Publication. Vol. 1, no. 3. http://www.briloon.org/mercury/hotspot/Mercury%20Matters.pdf

southern New Hampshire to Haverhill, Massachusetts. The mercury, as it comes from coal fired power plants, infiltrates streams, lakes and ponds, accumulates in organisms including fish and birds, poses a risk to humans, particularly pregnant women and children.

Further, in the 2007 report, higher mercury levels can be traced to local sources, specifically Merrimack Station. The coal-fired plant, together with a small coal-fired plant in northern Massachusetts, is responsible for producing 65 percent of the mercury air pollution that is deposited within 13 miles of the PSNH's facility in Bow, including the Merrimack River, according to a computer model used in the study[8]. Reducing mercury emissions from the largest sources, especially Merrimack Station, will have beneficial affects in reducing mercury in local food supplies.

The people of New Hampshire, indeed all the people in New England, deserve protection from the dangers of mercury contamination.

New Hampshire Sierra Club, on behalf of its thousands of members and friends, demands that your agency impose a stringent mercury specification on the coal burned at each PSNH electric generating unit; a limit that complies with the Clean Air Act; and that ensures the health and safety of the people of New Hampshire.

Very truly yours,

Catherine M. Corkery
NH Sierra Club
Chapter Director

Jerry Curran
NH Sierra Club
Chapter Chair

Arthur B. Cunningham
NH Sierra Club
Chapter Attorney

[8] In the same study, Oksana Lane, a biologist at the Biodiversity Research Institute, Gorham, Maine, has reported that the mercury levels in the blood and eggs of salt marsh sharp-tailed sparrows, including in a hot spot in the Parker River Wildlife Refuge at the mouth of the Merrimack River.